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Weapon Injury Data

Notes from the Weapon Related Injury Surveillance System (WRISS) January 2003

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1994-2001 Weapon Injuries to Massachusetts Residents

This bulletin provides a brief summary of stabbings and gunshot wounds as reported to the Weapon Related Injury Surveillance System (WRISS) by hospital emergency departments (EDs). WRISS has been collecting statewide data since 1994 from all Massachusetts acute care EDs.

Table 1 summarizes injuries reported to WRISS over an eight-year period by injury intent (e.g., assault, unintentional) and the type of weapon used.

Data Highlights:

- Weapon-related injury rates—the number of cases for every 100,000 MA residents—declined 40% from 1994 to 1998. Rates, however, increased 10% from 1998 to 2001.
- Assault-related firearm injuries decreased 57% between 1994 (n=625) and 1997 (n=270), but have increased 24% since 1997.
- Unintentional/accidental firearm injuries have been declining over the last eight years. The largest one-year decline of 43% occurred between 1998 (n=44) and 1999 (n=25).
- Unintentional/accidental non-powder gun (pellet, BB) injuries have increased 46% since 1999.

Table 2 presents assault-related data for 2000 and 2001 by patient's city of residence.

WRISS Fast Track:

WRISS recently developed a new system to more quickly track and disseminate overall counts of gunshot and stabbing-related injuries treated in Massachusetts hospital EDs. If you are interested in receiving the Fast Track summary, please forward an email request to: beth.hume@state.ma.us.

MassCHIP:

WRISS data will soon be available through MassCHIP, the Massachusetts Department of Public Health's free internet-accessible data warehouse. MassCHIP offers health-related information from a variety of data

Table 1. Number of Injuries Treated by Massachusetts Emergency Departments for Gunshot and Sharp Instrument Wounds, 1994-2001

Massachusetts Residents	Number of Cases Reported by Year							
	1994	1995	1996	1997	1998	1999	2000	2001
Assault-related Injuries:								
Assault-related cut/pierce injuries	1885	1684	1553	1353	1253	1287	1312	1361
Assault-related gun injuries	662	526	393	312	318	375	328	379
Firearms	625	503	337	270	291	339	286	335
Nonpowder guns	37	20	43	25	20	30	34	42
Other gun type	0	3	13	17	7	6	8	2
Total Assault-related	*2547*	*2210*	*1946*	*1665*	*1571*	*1662*	*1640*	*1740*
All Other Injuries:								
Unintentional/accidental gun injuries	163	155	166	158	117	94	130	138
Firearms	69	65	55	56	44	25	29	20
Nonpowder guns	92	86	108	96	71	64	94	114
Other gun type	2	4	3	6	2	5	7	4
Intentional Self-Inflicted gun injuries	47	47	35	26	31	26	21	26
Firearms	44	43	32	22	30	24	20	23
Nonpowder guns	3	3	3	3	1	1	1	3
Other gun type	0	1	0	1	0	1	0	0
Unknown intent-gun injuries	108	100	72	48	54	38	33	60
Firearms	82	68	53	30	42	25	14	31
Nonpowder guns	26	32	17	16	11	13	16	28
Other gun type	0	0	2	2	1	0	3	1
Total All Other	*318*	*302*	*273*	*232*	*202*	*158*	*184*	*224*
TOTAL NUMBER OF CASES	***2865***	***2512***	***2219***	***1897***	***1773***	***1820***	***1824***	***1964***
RATE per 100,000 Residents	***46.9***	***40.9***	***35.9***	***30.5***	***28.2***	***28.8***	***28.7***	***30.9***

The above counts are for Massachusetts residents who were treated in MA emergency departments and includes persons who were subsequently admitted to the hospital or died. Please use caution accordingly when comparing counts reported here to other publications.

sources. It provides instant topics of interest and a query-based interface for customizing data to meet individual user needs. Check out the MassCHIP web site at: www.state.ma.us/dph/ose/mchphome.htm.

Special Thanks:

Special thanks to all of the emergency department staff—nurses, clerks, managers, physicians, directors, and all others—whose actions directly contribute to the success of the Weapon Related Injury Surveillance System.

Notes:

Based on hospital record reviews, approximately 70-80% of reportable cases (*all* gun-related injuries and assault-related sharp instrument injuries) are reported to WRISS, and included in the system. Pre-hospital deaths are not captured, but are included in annual vital statistics.

Numbers and rates provided here are not adjusted for hospital underreporting. Please note that rates for Table 1 may vary slightly from previous reports as yearly population estimates may not have been available at the time of publication. Rates for years 2000-2001 are based on US Census Bureau, Census 2000 P.L. 94-171 Redistricting File. All other years are calculated using population estimates from the MA Institute for Social and Economic Research (MISER).

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Table 2.* Number & Rate of Assault-related Gunshot & Sharp Instrument Wounds: MA Residents, Selected Cities, 2000-2001

		2000		2001	
Patient's City of Residence	*Population*	*number*	*Rate per 100,000*	*number*	*Rate per 100,000*
Group 1: Towns over 175,000 population:					
Boston	589,141	508	86.2	486	82.5
Group 1 Total:	*589,141*	*508*	*86.2*	*486*	*82.5*
Group 2: Towns 75,000-175,000 population:					
Brockton	94,304	74	78.5	70	74.2
Cambridge	101,355	16	15.8	15	14.8
Fall River	91,938	61	66.3	43	46.8
Lowell	105,167	46	43.7	32	30.4
Lynn	89,050	36	40.4	34	38.2
New Bedford	93,768	45	48.0	65	69.3
Quincy	88,025	10	11.4	15	17.0
Somerville	77,478	18	23.2	21	27.1
Springfield[1]	152,082	103	67.7	202	132.8
Worcester	172,648	91	52.7	72	41.7
Group 2 Total:	*1,149,644*	*501*	*43.6*	*576*	*50.1*
Group 3: Towns 50,000-75,000 population:					
Chicopee	54,653	10	18.3	13	23.8
Lawrence	72,043	88	122.1	75	104.1
Malden	56,340	18	31.9	12	21.3
Taunton	55,976	15	26.8	14	25.0
Group 3 Total:	*642,678*	*168*	*26.1*	*164*	*25.5*
Group 4: Towns 25,000-50,000 population:					
Chelsea	35,080	36	102.6	40	114.0
Holyoke	39,838	34	85.3	33	82.8
Pittsfield	45,793	15	32.8	14	30.6
Revere	47,283	22	46.5	20	42.3
Group 4 Total:	*1,623,056*	*227*	*14.0*	*279*	*17.2*
Group 5: Towns under 25,000 population:					
Group 5 Total:	*2,344,578*	*130*	*5.5*	*147*	*6.3*
Massachusetts:					
Statewide Total:	*6,349,097*	*1640*	*25.8*	*1740*	*27.4*

*Communities are grouped by population size and only cities and towns having ten cases or more per year are presented individually. The group total, however, provides the total number of cases and averaged rate for communities within the population group.

Statewide totals include cases for which the patient's city of residence was unknown or missing.

Rates that are based on counts less than 20 may be unstable. Caution should be used when interpreting these data. Yearly totals for communities not listed above can be obtained by contacting WRISS.

[1] Please note that 2001 marked the beginning of an effort to increase reporting levels for this city. Please use caution when interpreting these data.